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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/636,209	08/10/2000	Daniel Wu	00 P 7812 US	9131

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Siemens Corporation
Intellectual Property Department
186 Wood Avenue South
Iselin, NJ 08830

EXAMINER

BRITT, CYNTHIA H

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 06/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/636,209

Applicant(s)

WU, DANIEL

Examiner

Cynthia H. Britt

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13, 14, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 8-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.84 as being informal drawings.

A proposed drawing correction, corrected drawings, or formal drawings are required in reply to the Office action to avoid abandonment of this application. The objection to the drawings will not be held in abeyance.

Correction is required.

Specification

The disclosure is objected to because of the following informalities: The top margins do not leave enough space and holes have been punched through the words at the top of the page. A new copy of the specification is required including the claims with the proper margins at the top of the page. See 37 CFR 1.52 (1) (ii).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2-6 and claims 9-11 are dependent on

claims 1 and 8 and therefore inherit the 35 U.S.C. 112, second paragraph issues of the independent claims.

As per claim 1, it is unclear to the examiner how the redundant portion can be compared to the initial header portion (lines 3 and 4) when “if said comparing indicates that data has been written into said redundant portion, signaling an overwrite error” (lines 5 and 6). In other words, if there is no error, there is no data written, but if there is no data written, how can a compare be implemented?

As per claim 8, it is unclear to the examiner how “...comparing a redundant portion at the end of said segment to an initial header portion or said segment; ...” lines (2 and 3), can “...indicate(s) a difference between said segments...” nor is it clear how this compare can “... determine(ing) which portion is valid;...” (lines 4 and 5).

Claim Objections

Claim 12 is objected to because of the following informalities: In line 3 of claim 12, “a least one...” should be “at least one...” and, in lines 5 and 6, “comparater” should be “comparator”. Appropriate correction is required.

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

Claim 12 would be allowable if amended to overcome the above objections.

Claim 16 would be allowable if the independent claim 12 were amended to overcome the above objections.

The following is a statement of reasons for the indication of allowable subject matter:

The claimed invention (claims 12, and 16) recites novel features such as " A buffer system able to detect buffer corruption comprising: a plurality of buffers with logically contiguous addressing; a(t) least one buffer comprising an initial portion and a final portion; a detector for determining that a write has been performed on said at least one buffer; a comparator for comparing said initial portion and said final portion after a write; and a signaler for sending an alert when said comparator indicates an erroneous overwrite has occurred wherein said signaler can cause stack to be dumped and other debug information to be collected." The prior arts of record, singly or in combination, fail to teach these steps in detecting memory overwrite errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 7, 13, and 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Natrasevski et al. U. S. Patent No. 5,475,820 in view of Ozawa Japanese Patent No. JP 04100338 A.

As per claims 7, and 13, Natrasevski et al. teach a system including a processing element that stores write management information identifying which sectors have been written and which sectors are available to be written in a magneto-optical disk with write-once-read-many (WORM) capability. The write management information is stored in a separate write management directory on the media, which is typically loaded into the drive controller memory when the media is first loaded into the drive. Whenever the drive receives a write command, it checks the write management directory to determine if the sector has already been written. If the directory indicates that the sector has already been written, the drive returns an error, otherwise, the drive writes the sector and updates the write management directory. If the sector address has been previously written, it returns an overwrite error (Abstract, Figures 1 and 5,

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column 7 lines 26-49). Not explicitly disclosed is the redundant portion at the end of the segment being compared.

However, in an analogous art, Ozawa teach locating a transmission error by inputting a same nonreproducible data to a head record and a final record of a transmission data and comparing the head record and the final record at reception so as to confirm the coincidence (Abstract). Therefore, it would have been obvious to a person having ordinary skill in the art at the time this invention was made to have used the method of using redundant portions of a record to detect transmission errors as taught by Ozawa with the method of detecting memory errors of Natrasevschi et al. This would have been obvious because one of ordinary skill in the art would have known that the transmission system would inherently have a memory (buffer) in which to store the data to be transmitted, and as suggested by Natrasevschi et al., where overwrite errors are avoided by keeping track of which sectors have been written already (column 5 lines 2-8)

As per claim 15, Natrasevschi et al. teach four real time methods of preventing overwrite errors. In one of these methods, two separate methods are used to indicate that a sector has been written. The write management directory contains pairs of pointers, each pair defining a contiguously written area of the media, as in the second embodiment. Also, each sector within the media contains information, typically a flag bit that indicates whether the sector has been previously written. When a write command is received by the drive, it first checks the write management directory and determines whether the address of the sector to be written lies within any of the contiguous areas

defined by the pointers. If the sector does lie within any of the contiguous areas, the drive returns an error since the sector has been previously written. If the sector is outside the contiguous areas, the drive determines whether a new set of pointers needs to be created for a new contiguous area. If there is room in the write management directory, a new set of pointers is created. If the write management directory has become full, its use is discontinued, and the flag bit within the sectors is then used (column 5 lines 2-55).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,295,619

Hasbun et al.

This patent teaches a method for storing data in a memory partitions the memory into a plurality of partitions. A primary logical identifier is stored in the memory to identify each partition of data. A secondary identifier number is also stored in the memory to identify each partition of data, the secondary logical identifier redundant to the primary logical identifier. A primary logical identifier is used to locate at least one partition of data stored in the memory after receiving a requested partition number identifying a requested partition. The secondary logical identifier is used to compute a value to further identify the at least one partition of data. The value is computed by performing a logical AND operation between the primary logical identifier and the secondary logical identifier. This value is compared with the requested partition

number. A method of detecting column short bit locations in a memory arranged as m words of n bits of memory. First a written stripe of data is written to the memory, each bit of the written stripe of data having a known value. The written stripe of data is read from memory. The written stripe of data is compared to the read stripe of data. The bit errors are located by locating a position of each inverted known value in the read stripe of data.

U.S. Patent No. 5,825,736

Kimura et al.

An optical disk apparatus has a data recording circuit for recording user data in a data portion of a sector on an optical disk. The optical disk is formed with a plurality of tracks in a concentric circular shape or spiral shape on the surface thereof and is possible of data write based on a sector unit. Each track is segmented into a plurality of sectors. The apparatus also has a detection circuit for detecting a resynchro pattern recorded together with user data from a regenerative signal obtained from the data portion of a sector before recording user data in the sector, a count circuit for counting a number of resynchro patterns detected, and an overwrite preventive circuit for stopping recording data on the sector when a count value of the count circuit is not less than a predetermined value.

U.S. Patent No. 6,052,743

Schwan et al.

This patent teaches that an overwrite error can be detected by the mini-driver

iterator when a write is attempted. The write iterator will bump up against the read head, and recognize that the user has failed to read data out of the circular buffer fast enough. The mini-driver could shut down the acquisition, noting the reason (an overwrite error).

An FPGA Controlled WDM Buffer Memory *Wu et al.* Conference on Lasers and Electro-Optics, 2000. Page(s): 340 –341

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia H. Britt whose telephone number is 703-308-2391. The examiner can normally be reached on Monday - Thursday .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CHB
May 28, 2003

Cynthia Britt
Examiner
Art Unit 2133

David Ton

**DAVIDTON
PRIMARY EXAMINER**